

## AMENDMENT

### In the Specification

Please insert prior to the first paragraph on page 1 the following text:

#### **“CROSS-REFERENCE TO RELATED APPLICATIONS:**

[0001] This application claims the benefit of PCT Application No. PCT/AU2003/001202 (WO 2004/024947 A1) filed September, 15, 2003 which claims benefit of Australian Provisional Patent Application No. 2002951411 filed September 14, 2002. Said applications are incorporated herein by reference.”

Please replace paragraph [0027] with the following rewritten paragraph:

[0027] A common polymorphism in humans has been identified in the gene encoding the skeletal muscle protein,  $\alpha$ -actinin 3 (*ACTN3*) that is only present in type 2 (fast) fibers. Three possible genotypes 577RR (wildtype – expresses  $\alpha$ -actinin-3), 577RX (heterozygous -  $\alpha$ -actinin-3 present), and 577XX (homozygous null – no  $\alpha$ -actinin-3 in skeletal muscle), have been identified. The allelic frequency varies in different ethnic groups (i.e. about 18% of Caucasians are  $\alpha$ -actinin-3 deficient compared to ~1% of African Zulus) (see Table 3). As discussed in the Examples below, in Caucasian elite sprint/power athletes, the frequency of the 577RR genotype is very low. Thus a screening procedure for *ACTN3* 577XX genotype, may provide assistance in identifying for example young Caucasian individuals with potential for elite performance in sprint or power-type sports and events. In contrast, in Caucasian elite endurance athletes, the frequency of the 577XX genotype is relatively higher. Thus a screening procedure for *ACTN3* 577XX genotype, may also provide assistance in identifying for example young Caucasian individuals with potential for elite performance in endurance sports and events. In addition, Table 6 illustrates the genotype and allele frequencies of *ACTN3* 577R/X alleles in different human populations. In Table 6 and Table 2, the negroid Africans (ie Zulus) screened have an extremely low number of 577 XX individuals. Thus, the screening of *ACTN3* in negroid African populations (and, likely, the related West Africans and African-Americans) to detect 577XX genotypes may prove useful in identifying individuals with sprint/power potential. In one embodiment, a method for screening for an *ACTN3* allele (e.g. 577R, 577X) alone or in

combination with another screening methods may be used to select, or at least assist in the selection of, young individuals with elite sprint/power potential (e.g. potential as track sprinters, short distance swimmers, and track cyclists).